

Remarks

The objection to “interconnect” in claim 1, and the rejection of claims 1 and 2 under Section 112 with respect to “ink supply module” have been rectified by amendment.

Original claims 1-3 have been rejected based on obviousness-type of double patenting with U.S. Patent No. 6,290,343. However the amendment of claims 1-3 is believed to obviate the need for a terminal disclaimer, and the Examiner is requested to withdraw this ground of rejection.

Original claims 1-3 stand rejected under Section 102(b) of 35 USC as being anticipated by the Yamashita reference. The rejection is traversed based on the amendments made to these claims, and favorable reconsideration is earnestly solicited.

Independent apparatus claim 1 now recites an air compressor device which applies greater air pressure during a startup mode prior to reaching a minimum threshold positive pressure, and thereafter a different operational printing mode. New dependent claims 4-12 recite additional features including providing multiple ink supply modules of black and color ink having operational parameters which provide a basis for the predetermined air pressure applied during the startup and operational printing modes.

As best understood by reading the brief abstract, the Yamashita pressure system seems to operate with “constant” pressure until no ink remains in the ink supply bag. There is no mention of any startup mode as contrasted to an operational printing mode, or the use of multiple printheads having different operational parameters which provide a basis for having different predetermined air pressure requirements.

Similarly independent method claim 3 now recites accelerating an increase of the air

pressure during a non-printing startup mode. New dependent method claims 13-18 recite additional features including techniques for preventing buildup of excessive air pressure, as well as controlling a speed of an air compressor to accelerate the time for startup mode and to maintain optimum operational air pressure within a predetermined range.

Accordingly the system and method of the amended and new claims are not disclosed in the Yamashita reference, and favorable reconsideration and withdrawal of the rejection under Section 102(b) is earnestly solicited.

It is now believed that this application with claims 1-18 is now in condition for allowance, notice of which if respectfully requested. In the event the Examiner deems it necessary to discuss any further changes to advance this case to issuance, please contact the undersign attorney by telephone.

Respectfully submitted,

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Enclosure: Addendum showing claims after amendment

ADDENDUM

CLAIMS 1 – 18 AFTER AMENDMENT

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1. A system for ink replenishment for an inkjet printer comprising:
 - a frame for holding one or more ink supply modules;
 - an interconnect member on said frame, said interconnect member having an ink supply interface and an air supply interface;
 - an ink supply module mountable on said frame for coupling to said ink supply interface and for coupling to said air supply interface so that ink in said ink supply module may be subjected to predetermined positive pressures greater than ambient air pressure;
 - an air compressor device in communication with said air supply interface to provide variable air pressure to said ink supply module to facilitate a startup non-printing mode prior to reaching a minimum threshold positive pressure and a different operational printing mode after reaching the minimum threshold positive pressure for transmission of liquid ink from said ink supply module to an inkjet print cartridge;
 - a sensor for monitoring the air pressure of said air compressor device; and
 - control electronics coupled to said air compressor device and to said sensor to control said air compressor device based on signals received from said sensor in order to provide greater air pressure from said air compressor device during said startup non-printing mode thereby reducing startup time.
2. The system of claim 1 which further includes liquid ink inside of said ink supply module.
3. A method of providing ink from an external ink supply to an inkjet printhead comprising:

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providing an auxiliary supply of ink in a collapsible bag inside of a protective enclosure;
connecting the auxiliary ink supply with a print cartridge through an ink delivery conduit;
subjecting the collapsible bag to air pressure greater than ambient air pressure to facilitate transmission of the ink from the auxiliary supply of ink to the print cartridge during ink ejection from the inkjet printhead;

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monitoring the air pressure of said subjecting step; and

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controlling operation of an air compressor in order to accelerate an increase of the air pressure applied to the collapsible bag during a non-printing startup mode as well as stabilize the air pressure applied to the collapsible bag during a different operational printing mode in accordance with predetermined parameters.

4. The system of claim 1 which further includes an air leak vent in said ink supply module to allow pressure equalization with the atmosphere during shipping, or storage, or non-printing.

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5. The system of claim 1 which further includes a plurality of ink supply modules all connected to said air supply interface so that ink in said plurality of ink supply modules may be subjected to predetermined positive pressures greater than ambient air pressure.

6. The system of claim 1 wherein said control electronics controls the air pressure of said air compressor device by operating said air compressor at a given high speed during said startup non-printing mode.

7. The system of claim 6 wherein said control electronics controls the air pressure of said air compressor device by operating said air compressor at a lesser speed during said different operational printing mode.

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8. The system of claim 5 wherein said plurality of ink supply modules includes a black ink module and a color ink module, and wherein the minimum threshold positive pressure required in order to commence said different operational printing mode is based on operational parameters of said black ink module.

9. The system of claim 5 wherein said plurality of ink supply modules includes a black ink module and a color ink module, and wherein the minimum threshold positive pressure required in order to commence said different operational printing mode is based on operational parameters of said color ink module.

10. The system of claim 1 wherein the minimum threshold positive pressure required in order to commence said different operational printing mode is based on a determination of an amount of ink left in said ink supply module.

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11. The system of claim 1 wherein said ink supply module is removably installable on said frame.

12. The system of claim 11 wherein said ink supply module includes liquid ink from the following group: black, cyan, magenta, yellow.

13. The method of claim 3 which further includes providing a plurality of inkjet printheads each respectively connected to its own separate auxiliary supply of ink; and

subjecting all of the separate auxiliary supplies of ink to a predetermined sequence of air pressures greater than ambient air pressure.

14. The method of claim 3 which further includes reducing the air pressure applied to the collapsible bag to maintain the air pressure below a predetermined maximum level.

15. The method of claim 3 which further includes leaking air from the protective

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enclosure to prevent undesirable excessive air pressure applied to the collapsible bag.

16. The method of claim 13 which further includes providing an auxiliary supply of black ink and a separate auxiliary supply of color ink, and applying increased air pressure during a startup mode until reaching a minimum threshold positive pressure based on black or color ink printing parameters, and then applying a different lower air pressure during an

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17. The method of claim 13 which further includes providing an auxiliary supply of black ink and a separate auxiliary supply of color ink, and applying different air pressure during a startup mode or an operational mode based on a determination of an amount of ink left in the auxiliary ink supplies.

18. The method of claim 3 which includes operating an air compressor at a first speed during the non-printing startup mode, and operating the air compressor at a lesser speed during the different operational print mode to maintain the air pressure applied to the collapsible bag during the operational print mode above a minimum operation pressure for a printhead as well as below a predetermined maximum operating pressure.
